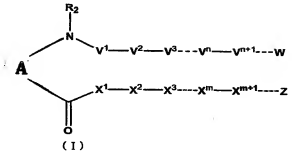
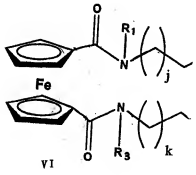
AMENDMENTS TO THE CLAIMS

1. (**Currently Amended**) A ferrocene compound represented by the following formula (I):



(I)

wherein A represents a divalent ferrocene-containing linker ~~or ferrocene-1,1'-yl,~~ represented by the following formula (VI):



VI

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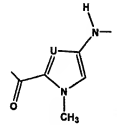
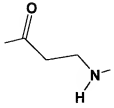
wherein R_1 and R_3 represent a hydrogen atom or alkyl; j and k represent the same or different integer of from 0 to 5, R_2 represents a hydrogen atom or alkyl; n and m represent ~~any~~ natural numbers; and wherein each of $[[V^1]]$ V^2 to V^{m+1} and each of $[[X^1]]$ X^2 to X^{m+1} is independently represented by the following formula (II) or (II-1):



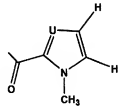
(II)



(II-1)

wherein each of V^1 and X^1 is represented by the formula (II),

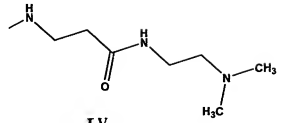
W represents the following formula (III):



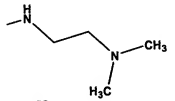
III

wherein U in the formulae (II) and (III) represents a nitrogen atom, methine or hydroxymethine;

and Z represents the following formulae (IV) or (V):



IV



V

and both ends of each of V^n and X^m in the formula (I) form a (-CO-NH-) bond except that a bond on the side of the ferrocene-containing linker ~~or ferrocene-1,1'-yl~~ of V^1 is (-CO-NR_2-).

2. (Previously Presented) The ferrocene compound according to Claim 1 wherein n and m are natural numbers in the range of 3 – 20.

3. (Previously Presented) The ferrocene compound according to Claim 1 or 2 wherein the number of n is smaller by one than that of m.

4-5. **(Cancelled)**

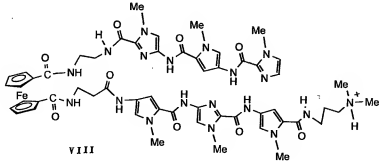
6. **(Currently Amended)** The ferrocene compound according to Claim [[4]] 1 wherein j and k are 1.

7. **(Currently Amended)** The ferrocene compound according to Claim [[4]] 1 wherein R_1 and R_3 represent a hydrogen atom.

8. **(Cancelled)**

9. (Previously Presented) The ferrocene compound according to Claim 1 wherein R_1, R_2 and R_3 represent alkyl having one or several carbon atoms.

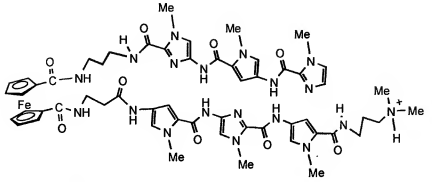
10. **(Currently Amended)** The ferrocene compound represented by the following formula (VIII):



VIII

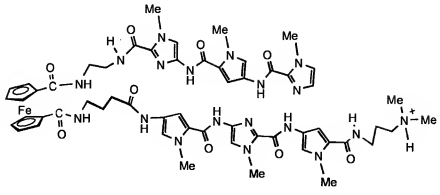
11. (**Cancelled**)

12. (**Currently Amended**) The ferrocene compound represented by the following formula (1b):



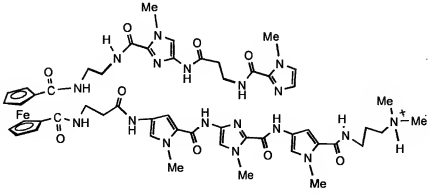
(1b)

13. (**Currently Amended**) The ferrocene compound represented by the following formula (1c):



(1c)

14. (**Currently Amended**) The ferrocene compound represented by the following formula (2):



(2)

15. **(Cancelled)**

16. **(Withdrawn-Currently Amended)** A method for the production of the ferrocene compound according to Claim 1, comprising a condensation step with ~~the use of~~ ferrocene methyl dicarboxylate, aminoferrocene methyl carboxylate or ferrocene carboxylic acid as a starting material.

17. (Previously Presented) A ligand consisting of the ferrocene compound according to Claim 1 for sequence-specific detection of double-stranded nucleic acid molecules.

18. **(Withdrawn-Currently Amended)** A method for the electrochemical detection of double-stranded nucleic acid molecules comprising providing ~~with the use of~~ a compound that can sequence-specifically bind to the double-stranded nucleic acid molecules and permitting the compound to sequence-specifically bind to the double-stranded nucleic acid molecules, wherein the compound comprises the ferrocene compound according to claim 1.

19. **(Withdrawn-Currently Amended)** **[[A]]** The method for electrochemical detection of double-stranded nucleic acid molecules according to Claim 18, wherein the compound is ~~with the use of~~ the ligand according to Claim 17.

20. **(Withdrawn-Currently Amended)** The method for electrochemical detection of double-stranded nucleic acid molecules according to Claim [[16]] 19, ~~which uses the ligand according to Claim 17~~ wherein each pair of V and X located in the formula (I) at a position

corresponding to G/C and A/T (U) base pairs in subject double-stranded nucleic acid molecules is composed of imidazole derivative/pyrrole derivative and pyrrole derivative/pyrrole derivative, respectively.

21. **(Withdrawn-Currently Amended)** [[A]] The method for electrochemical detection of double-stranded nucleic acid molecules according to Claim 18 wherein the double-stranded nucleic acid molecules are formed on a solid phase.

22. **(Withdrawn-Currently Amended)** [[A]] The method for electrochemical detection of double-stranded nucleic acid molecules according to Claim 21, ~~which uses~~ wherein the double-stranded nucleic acid molecules formed on the solid phase are in the form of a DNA microarray.

23. **(Withdrawn-Currently Amended)** A method for the detection of a single nucleotide polymorphism (SNP) [[by]] comprising the steps of the method for electrochemical detection of double-stranded nucleic acid molecules according to Claim 18 and detecting the SNP.

24. **(Withdrawn-Currently Amended)** An apparatus or device for ~~the~~ electrochemical detection of double-stranded nucleic acid molecules comprising, a solid phase with double-stranded nucleic acid molecules formed thereon, wherein the apparatus or device is capable of detecting sequence-specific binding ~~with the use~~ of the ligand for sequence-specific detection of

double-stranded nucleic acid molecules according to Claim 17 to double-stranded nucleic acid molecules on the solid phase.

25. **(Withdrawn-Currently Amended)** The apparatus or device for the electrochemical detection according to Claim 24, ~~which is~~ wherein the double-stranded nucleic acid molecules formed on the solid phase are in the form of a DNA microarray.

26. **(New)** The ferrocene compound according to Claim 1 wherein R_1, R_2 and R_3 represent hydrogen.

27. **(New)** A ligand comprising the ferrocene compound according to Claim 1 for sequence-specific detection of double-stranded nucleic acid molecules.